



LEGEND:

- ▶▶▶ DENOTES PATHS OF EXIT TRAVEL
- EXIT DENOTES DOOR AS AN EMERGENCY EXIT
- ◆ DENOTES STARTING POINT FOR TRAVEL DISTANCE
- ☺ DENOTES FIRE EXTINGUISHER LOCATIONS
- 1- HOUR RATED WALL



| Rev. | Date | Design | File no. | Drawing code | File name | Plot date | Plot scale |
|------|---------|--------|----------|--------------|-----------------|-----------|------------|
| 0 | 5/19/10 | | | | AF1024B-AR001P1 | 20100606 | |

| Designed by | Drawn by | Reviewed by | Submitted by |
|-------------|----------|-------------|--------------|
| | | | |

U.S. ARMY ENGINEER DISTRICT, AFGHANISTAN
CORPS OF ENGINEERS
APO AE 96338

| | |
|---|--|
| STANDARD DESIGN VARIOUS PROJECTS VARIOUS LOCATIONS, AFGHANISTAN | NCO BARRACK AF1024B-AR001P1 - LAYOUT1 |
|---|--|

| |
|------------------------------------|
| SHEET REFERENCE NUMBER: B |
|------------------------------------|

LIFE SAFETY PLAN SCALE: 1:100

CODE ANALYSIS:

- REFERENCES:**
2006 INTERNATIONAL BUILDING CODE (2006 IBC)
2006 LIFE SAFETY CODE (2006 NFPA 101)
2006 NFPA 10 - STANDARD FOR PORTABLE FIRE EXTINGUISHERS.
- IBC OCCUPANCY CLASSIFICATION:**
GROUP R-2 (NEW HOTELS AND DORMITORIES NFPA 101 6.1.8 AND CHAPTER 28)
- TYPE OF CONSTRUCTION (IBC):** TYPE II-B (UNPROTECTED/NONSPRINKLERED)
- IBC TABLE 503: ALLOWABLE HEIGHT AND BUILDING AREAS:**
GROUP R-2
ALLOWABLE AREA: 1486 SM
ALLOWABLE HEIGHT: 4 STORIES (16 M)
GROUP R-2
PROPOSED AREA: 625 SM
PROPOSED HEIGHT: 1 STORY (<16 M)
- IBC TABLE 601 & 602:** FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS FOR TYPE II-B

| BUILDING ELEMENT | RATING (HOUR) | REFERENCE |
|---|---------------|-----------|
| STRUCTURAL FRAME (COLUMNS, GIRDERS & TRUSSES) | 0 | TABLE 601 |
| BEARING WALLS EXTERIOR | 0 | TABLE 601 |
| BEARING WALLS INTERIOR | 0 | TABLE 601 |
| NONBEARING WALLS & PARTITIONS INTERIOR | 0 | TABLE 601 |
| FLOOR CONSTRUCTION | 0 | TABLE 601 |
| ROOF CONSTRUCTION | 0 | TABLE 601 |
| EXTERIOR WALL | 0 | TABLE 602 |
- IBC TABLE 803.5 - INTERIOR WALL AND CEILING FINISH REQUIREMENTS FOR R-2 OCCUPANCY/NONSPRINKLERED**

| GROUP | EXIT ENCLOSURES AND EXIT PASSAGEWAY | CORRIDORS | ROOMS AND ENCLOSED SPACES |
|-------|-------------------------------------|-----------|---------------------------|
| R-2 | B | B | C |
- NFPA 101 TABLE 7.3.1.2 - OCCUPANT LOAD**
HOTELS AND DORMITORIES = 18.6 SM/PERSON
CALCULATED = 34 OCCUPANTS
ACTUAL = 88 OCCUPANTS
- NFPA 101 TABLE 7.3.3.1 - EGRESS CAPACITY**
HOTELS AND DORMITORIES = 5 MM PER OCCUPANT
MINIMUM REQUIRED: 440 MM (88 OCCUPANTS x 5 MM PER OCCUPANT)
PROPOSED EGRESS CAPACITY: 3600 MM: (4) 900 MM DOORS
- NFPA 101 PARAGRAPH 28.2.6 - EXIT ACCESS TRAVEL DISTANCE**
MAXIMUM ALLOWED WITHIN ROOM OR SUITE TO CORRIDOR: 23 METERS
MAXIMUM ALLOWED CORRIDOR DOOR OF ANY ROOM OR SUITE TO NEAREST EXIT: 30 METERS
PROPOSED WITHIN ROOM OR SUITE TO CORRIDOR: 4 METERS
PROPOSED CORRIDOR DOOR OF ANY ROOM OR SUITE TO NEAREST EXIT: 17 METERS
- NFPA 101 PARAGRAPH 28.3.6.1.2 - CORRIDOR FIRE-RESISTANCE RATING (HOUR)**
REQUIRED: WALLS NOT LESS THAN ONE HOUR FIRE RESISTANCE RATING
PROPOSED: 1 HOUR RATING
- NFPA 101 PARAGRAPH 28.3.6.2 & TABLE 8.3.4.2 - DOORS INTO EXIT ACCESS CORRIDORS**
REQUIRED MINIMUM: 20 MINUTE FIRE PROTECTION RATING
PROPOSED: 20 MINUTE DOORS
- NFPA 101 PARAGRAPH 28.2.3.3 - CORRIDOR WIDTH**
REQUIRED: SUFFICIENT FOR OCCUPANT LOAD, BUT NOT LESS THAN 1120 MM
CALCULATED WIDTH REQUIRED PER OCCUPANT LOAD: 440 MM (88 OCCUPANTS X 5 MM)
PROPOSED: 1700 MM
- NFPA 101 PARAGRAPH 28.2.5.3 - COMMON PATH OF TRAVEL**
MAXIMUM ALLOWED: 10.7 METERS
PROPOSED: 10.7 M
- NFPA 101 PARAGRAPH 28.2.5.5 - DEAD END CORRIDORS**
PERMITTED: 10.7 METERS
PROPOSED: NO DEAD END CORRIDORS
- NFPA 101 PARAGRAPH 28.2.4.1 AND 7.4.1.1 - MINIMUM NUMBER OF EXITS**
REQUIRED: 2 MINIMUM
PROPOSED: 3 EXITS
- NFPA 101 PARAGRAPH 28.2.1.2 & 24.2 - SECONDARY MEANS OF ESCAPE**
ONE OF THE FOLLOWING REQUIRED:
1) DOOR, SIMILAR TO PRIMARY, BUT REMOTE FROM PRIMARY
2) OPERABLE WINDOW, 0.53 SM, NOT LESS THAN 510 MM WIDE, 610 MM HIGH, NOT MORE THAN 1120 MM AFF, WITHIN 6100 MM OF GRADE
PROPOSED: OPERABLE WINDOWS, 0.93 SM EACH PER SLEEPING ROOM
- NFPA 101 PARAGRAPH 24.2.2.4 - TWO PRIMARY MEANS OF ESCAPE**
AREA WITH DWELLING UNIT EXCEEDS 185 SM PER STORY
ALLOWED AREA PER STORY WITHIN DWELLING UNIT: 185 SM
PROPOSED AREA WITHIN DWELLING UNIT: 14 SM
REQUIRED PRIMARY EXITS: 1
PROPOSED PRIMARY EXITS: 1
- NFPA 101 PARAGRAPH 28.3.7.1 - SUBDIVISION OF BUILDING SPACES - NONSPRINKLERED**
REQUIRED: EACH GUEST ROOM OR DORMITORY ROOM SHALL BE SEPARATED FROM OTHER GUEST OR DORMITORY ROOMS BY FIRE BARRIERS HAVING FIRE RESISTANCE RATED OF NOT LESS THAN 1 HOUR
PROPOSED: 1 HOUR SEPARATION
- HAZARDOUS AREA PROTECTION TABLE 28.3.2.2.2**
STORAGE ROOMS: 1 HOUR SEPARATION REQUIRED
PROPOSED: NOT APPLICABLE
- NFPA 101 A.3.3.5.3 DORMITORY:** ROOMS WITHIN DORMITORIES INTENDED FOR THE USE OF INDIVIDUALS FOR COMBINED LIVING AND SLEEPING PURPOSES ARE GUEST ROOMS OR GUEST SUITES. EXAMPLES OF DORMITORIES ARE COLLEGE DORMITORIES, FRATERNITY AND SORORITY HOUSES AND MILITARY BARRACKS.
- NFPA 101 28.3.5.2 EXTINGUISHMENT REQUIREMENTS:** AUTOMATIC SPRINKLER PROTECTION REQUIRED UNLESS SLEEPING ROOMS HAVE DOORS DIRECTLY TO OUTSIDE. DUE TO AUSTERE DESIGN CRITERIA, THE GOVERNMENT WILL WAIVE THIS REQUIREMENT.

1 0 1 2 3 4 5 6 7 8 9
1:100

UNLESS NOTED OTHERWISE, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

APPROVED:
AVE DESIGNER OF RECORD

B4